

FIG.1

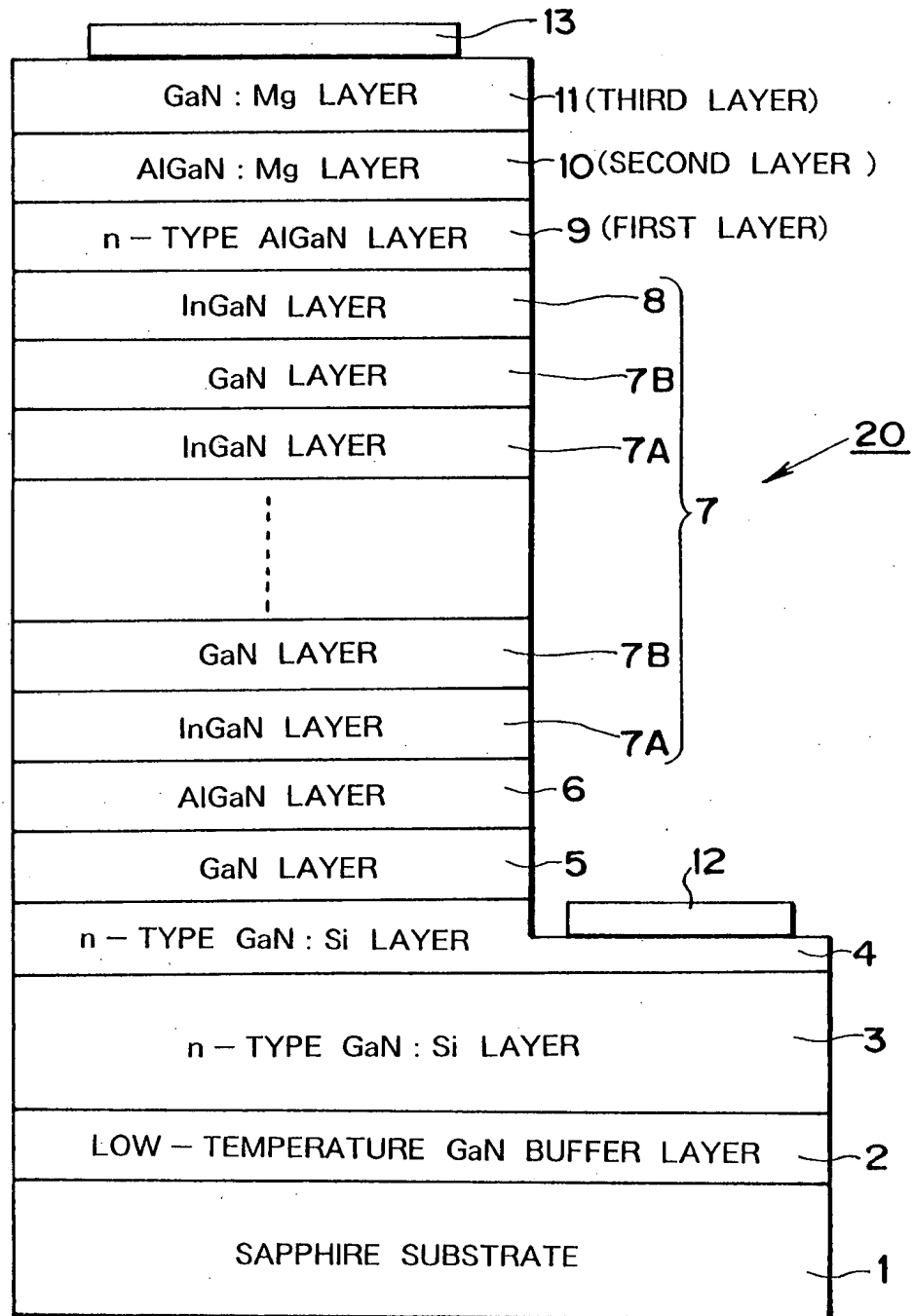


FIG.2

	FIRST LAYER THICKNESS Å	SECOND LAYER GROWTH CONDITIONS					SECOND LAYER CHARACTERISTICS		EMISSION CHARACTERISTIC
		GROWTH TEMPERATURE °C	THICKNESS Å	Al CONTENT	Mg FLOW RATE sccm	CONDUCTIVITY	CARRIER DENSITY cm ⁻³		
EXAMPLE 1	110	1000	250	0.05	600	p	6 x 10 ¹⁸	1505	
EXAMPLE 2	110	1000	750	0.05	600	p	6 x 10 ¹⁸	405	
EXAMPLE 3	110	1000	250	0.05	300	p	3 x 10 ¹⁸	1459	
EXAMPLE 4	110	1000	250	0.05	100	n	1 x 10 ¹⁷	280	
COMPARATIVE EXAMPLE 1	110	1000	750	0.05	100	n	1 x 10 ¹⁷	75	
EXAMPLE 5	110	900	250	0.05	600	p	5 x 10 ¹⁶	640	
EXAMPLE 6	110	800	250	0.05	600	n	5 x 10 ¹⁵	334	
COMPARATIVE EXAMPLE 2	110	900	750	0.05	600	p	5 x 10 ¹⁶	172	
COMPARATIVE EXAMPLE 3	110	800	750	0.05	600	n	5 x 10 ¹⁵	90	
EXAMPLE 7	110	800	250	0.15	600	n	5 x 10 ¹⁵	499	
EXAMPLE 8	55	800	250	0.15	600	n	5 x 10 ¹⁵	707	

FIG.3

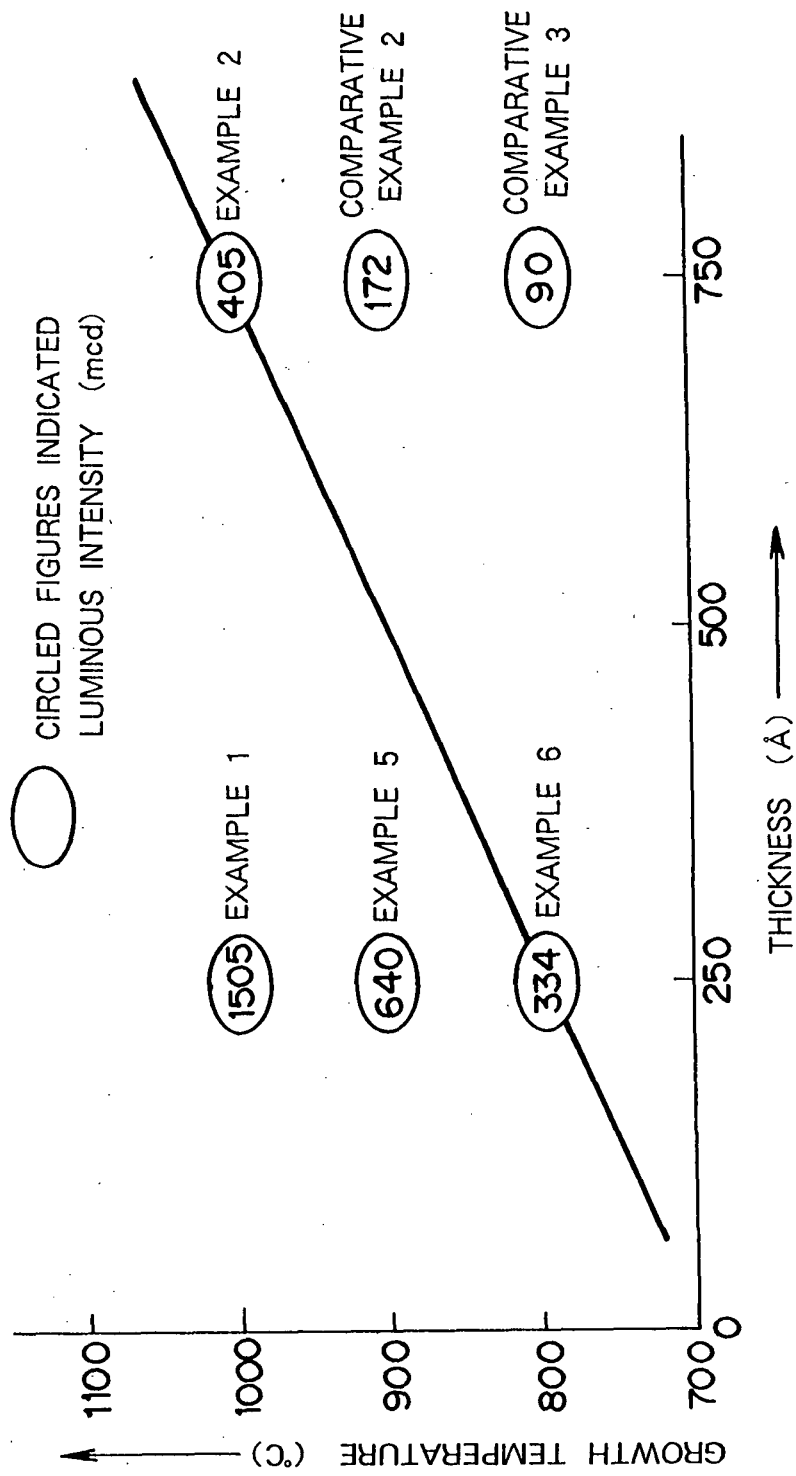


FIG.4

	FIRST LAYER THICKNESS Å	SECOND LAYER GROWTH CONDITIONS				SECOND LAYER CHARACTERISTICS		EMISSION CHARACTERISTIC
		GROWTH TEMPERATURE °C	THICKNESS Å	Al CONTENT	Mg FLOW RATE sccm	CONDUCTIVITY	CARRIER DENSITY cm ⁻³	
EXAMPLE 9	180	1050	250	0.05	600	p	2×10^{18}	1526
EXAMPLE 10	180	1040	250	0.05	600	p	2×10^{18}	1090
EXAMPLE 11	180	1040	250	0.025	600	p	3×10^{18}	923
EXAMPLE 12	180	1000	250	0.05	600	p	6×10^{18}	1353
EXAMPLE 13	180	800	250	0.05	600	n	5×10^{15}	994
EXAMPLE 14	180	800	250	0.05	800	n	2×10^{17}	854
EXAMPLE 15	180	800	250	0.1	600	n	5×10^{15}	1289
EXAMPLE 16	180	800	250	0.15	600	n	5×10^{15}	1051